

Amendments to the Specification:

Please add the following new paragraphs before paragraph [0001]:

Cross-reference to Related Applications

This application claims priority to and the benefit of PCT application number PCT/US04/011575, filed April 15, 2004, and U.S. provisional patent application Serial No. 60/462,940, filed April 15, 2003, which are incorporated herein by reference in their entirety.

Reference to a Sequence Listing, a Table, or a Program Listing

This application refers to a "Sequence Listing" listed below, which is provided as a paper copy and a computer readable form labeled "Sequence listing.txt" (1,422 bytes, created on October 18, 2007, 11:02:13 AM), which is incorporated herein by reference in its entirety.

Please replace paragraph [0029] with the following rewritten paragraph:

[0029] Purpose: SEQ ID NO. 3, Demegen peptide P-113 was screened for anti-candidal activity. Of the organism routinely used for preservative efficacy testing, *Candida albicans* is often the most resistant.

Please replace paragraph [0031] with the following rewritten paragraph:

[0031] Conclusion: In our system, as in the studies performed by Demegen and others, SEQ ID NO. 3, P-113 is effective at killing *Candida albicans*.

Please replace paragraph [0032] with the following rewritten paragraph:

[0032] Purpose: To determine whether 4 distinct ~~Demegen~~ peptides, ~~P-113, P-113D, D4E1, and D2A21~~ SEQ ID NO. 3 (P-113), SEQ ID NO. 4 (P-113D), SEQ ID NO. 1 (D4E1), and SEQ ID NO. 2 (D2A21) are effective in killing a variety of microorganisms

Please replace paragraph [0034] with the following rewritten paragraph:

[0034] Results: One hour of peptide exposure at this concentration resulted in a dramatic biocidal effect, particularly for SEQ ID NO. 1 and SEQ ID NO. 2 ~~the D4E1 and D2A21~~ peptide. The three hour exposure time resulted in a similar, or slightly but not significantly greater effect. The results from the 1 hour exposure time are shown in the Table below. SEQ ID NO. 3 and SEQ ID NO. 4 ~~The P-113 and P-113D~~ at this concentration was effective only on *P. aeruginosa*, *C. albicans*, and *F. solani*, but had no effect on either *S. aureus* and *S. marcescens*. A one hour exposure to both of the other two peptides resulted in complete kill of all 5 organisms.

Please replace paragraph [0035] with the following rewritten paragraph:

[0035] Conclusion. The selectivity of SEQ ID NO. 3 ~~P-113~~ on *Candida* and *Pseudomonas* may prove useful for certain applications. There was no significant difference between the SEQ ID NO. 3 ~~P-113~~ (L) and SEQ ID NO. 4 ~~P-113D~~. The broad spectrum efficacy of SEQ ID NO. 1 ~~D4E1~~ and SEQ ID NO. 2 ~~D2A21~~ indicates that these peptides may prove extremely useful for treating a wide variety of ocular infections, and in particular, contact-lens associated keratitis.

Please replace paragraph [0036] with the following rewritten paragraph:

[0036] Purpose: To establish a dose-response curve for SEQ ID NO. 3, SEQ ID NO. 1, and SEQ ID NO. 2 ~~P-113, D4E1 and D2A21~~, focusing specifically on their effectiveness against bacteria.

Please replace paragraph [0038] with the following rewritten paragraph:

[0038] Results: Complete kill of *P. aeruginosa* resulted from concentrations as low as 1

443 was not effective against *S. aureus*. Since the traditional logarhythmic response was not observed for most of these concentration series, the results are shown in tabular form below.

Please replace paragraph [0039] with the following rewritten paragraph:

[0039] Conclusion: Peptides SEQ ID NO. 1 D4E1 and SEQ ID NO. 2 D2A21 are extremely effective against the two bacterial species tested, indicating that both gram-positive and gram-negative bacteria might be suitable targets for therapeutic applications of these molecules. The low concentrations required for complete kill of 10⁵ cfu/mL bacteria indicate that the therapeutic index (safety) might be very high, since concentrations of peptide as high as XXX/mL have been reported to be non-toxic in XXX cells.